

REMARKS

The originally filed informal drawings have now been replaced with a set of formal drawings in response to the Notice of Draftperson's Patent Drawing Review mailed with the Office Action of August 7, 2003. It is believed that the drawings are now in compliance with 37 CFR 1.84. No new matter has been added.

Previous independent claims 24 and 40 have been replaced with new claims 24, 47 and 48. Dependent claims 25, 29, 34, 36-38, 41, 42 and 44 have been amended to accommodate changes in the independent claims, the claim numbering and to provide proper antecedents.

Previous claims 24 - 45 were rejected under 35 USC 103(a) as being unpatentable over Ehrick et al. in view of Booth, Matsumoto, Neelly et al. and Pickler.

In general terms, applicant's invention provides an improved multi-functional waste and recyclable materials compaction and handling apparatus. The overall apparatus is adapted to be mounted to the chassis of a conventional truck for transport between the pickup sites and the disposal site in the usual manner. Applicant's apparatus as described and claimed includes a storage container for the various materials. An elongated charging hopper 46 is defined and connected adjacent to and alongside the storage container 26, the charging hopper being adapted to receive the materials which are deposited therein. The charging hopper is provided with openings 48, 50, defining pathways leading into the interior of the storage container 26. The packing head 52 is mounted for travel in both rearward and forward directions within and along the elongated charging hopper. At least one driver, which preferably takes the form of one or more hydraulic cylinders, is connected to the packing head 52 to effect the travel of same along and within the charging hopper between positions adjacent the openings 48 and 50. The packing head 52 is provided with opposed packing faces 70, 72 which, during use, engage the materials which have been placed in the charging hopper 46 and, as the packing head is made to travel along and within the charging hopper by the driver, the materials are compacted and positively forced through the pathways and thence into the interior of the storage container.

The above-described back-and-forth motion of the packing head 52 empties the charging hopper 46 and at the same time compacts the materials and positively forces same into the storage container 26. In a preferred embodiment the materials are guided by convexly-curved portions associated with the storage container in such a way as to assist in completely filling the storage container with the compacted materials.

The above is only a brief description of some of the salient features of applicant's invention and further significant details are set out in the various dependent claims which have been presented.

As will be seen from the above listing of claims, applicant's new independent claims 46 and 47 are presented thereby to more clearly and fully define applicant's invention and to distinguish patentably over the cited prior art.

Turning now to the cited references, Ehrick et al., U.S. Patent 2,002,993 dated May 28, 1935 discloses a truck-mounted receptacle in the form of a rectangular body of substantially uniform internal cross-section. A "compressor plate" is disposed within the rectangular body and has substantially the same cross-sectional area as the body itself. The compressor plate is provided with a plurality of nuts which receive respective elongated screws extending lengthwise of the body and which are rotated to move the compressor plate rearwardly thereby to effect some amount of compression of garbage and other materials placed in the box-like body. It is quite evident that Ehrick et al. teaches nothing about effecting compacting in two directions. The Ehrick et al. compressor plate operates in one direction and requires a balanced force on each side to function. The placing of any material behind the compressor plate would obviously cause major problems. The structure shown has only one compartment and is not designed to function with separate loading or charging hoppers. The Ehrick et al. arrangement could not possibly function with a charging hopper with a double-acting packing head as provided in applicant's arrangement, which hopper has openings leading into the interior of the body since, as noted above, Ehrick et al. is provided with a compressor plate designed to

compact in one direction only. The introduction of compacted waste materials behind Ehrick et al.'s compressor plate would render Ehrick et al. totally inoperative.

The Examiner has suggested that the teachings of Booth could somehow or other be combined with those of Ehrick et al. to produce a structure similar to that described and claimed by applicant. Booth in fact teaches completely away from the charging hopper concept described and claimed by applicant. In the Booth arrangement, the overall flow path of all the material is generally transverse to the direction of the double action compacting mechanism. Furthermore, Booth utilizes **gravity** to feed the material through the compactor. The Booth can crusher has a closed end structure defined by a pair of spaced crushing blocks mounted at the opposing ends of a "sheath". The cans to be crushed **fall by gravity from a hopper 14** downwardly through an upper opening 18 extending along the top of the sheath, which opening is sufficiently wide as to permit passage of uncrushed cans into the sheath. This sheath is provided with a lower opening which is narrower than the upper opening 18, (as seen in Fig. 3 for example), so as to permit cans which have been crushed to fall downwardly **by gravity** away from the crusher and into a suitable receptacle. Booth teaches away from the use of a dual direction packing head **which travels along and within a charging hopper having pathways for the compacted materials leading into the interior of the storage container** to which the charging hopper is attached and through which pathways the compacted materials are forced.

In addition to the points noted above, there is clearly no incentive to attempt to combine the teachings of Ehrick with Booth. Booth allegedly effects a high degree of material compaction due to the use of relatively small area packing surfaces. Ehrick has a very large area packing plate and would be incapable of further compacting any highly compressed materials produced by Booth even if a way could be found to transfer Booth's output **by gravity** into the Ehrick compaction chamber. There is no suggestion or motivation to combine their teachings?

It is accordingly submitted that the Ehrick et al. and Booth structures are totally incompatible with one another and a person skilled in this art would not in any way be led or induced by these references to provide anything similar to that described and claimed by

applicants. Applicant's claims recite **compacting materials in a charging hopper and positively forcing same through defined pathways into a storage chamber** such features are totally absent from Booth and Ehrick, and there is no reasonable way to reconstruct these references to provide this advantageous manner of operation.

Matsumoto, U.S. Patent 5,035,564 of July 30, 1991 adds nothing, in terms of its fundamental teachings, to the disclosures of Ehrick et al. and Booth. Applicant must assume this reference was cited because of the loading hopper. The extension of the loading hopper is fixed in either the open or closed position and does not change during the loading cycle. It also does not teach a loading hopper that can be stored in the dumping position for traveling, as it must be lowered to meet the maximum width requirement.

The Neelly et al., U.S. Patent 5,836,470 issued November 17, 1998, again does not in itself or in any reasonable combination with the remaining references suggest applicant's unique combination of features as claimed. In Neelly et al., the expansion of the receptacle is not done for the purpose of increasing the volume but rather for holding the bags in place. The expansion is controlled by the size of the bag against some type of spring action. Therefore the reference does not teach anything similar to applicant's elongated loading hopper that works with an elongated charging hopper to place material into the charging hopper.

Pickler, U.S. Patent 6,296,132 issued October 2, 2001 is totally unlike applicant's invention as described and presently claimed. There is nothing in Pickler taken alone or in any reasonable combination with the remaining cited references suggesting applicant's unique elongated charging hopper connected to a storage container with the charging hopper containing a dual action packing head which moves to-and-fro within the charging hopper thereby to compact and force materials through the pathways as defined by the hopper and thence into the interior of the storage container.

The comments noted above clearly apply to applicant's new independent claim 46 and they apply also to new independent claim 47. Claim 47 recites in part that the charging hopper extends along a lower portion of the storage container and also emphasizes the compaction and

positive forcing of compacted materials from the charging hopper into the storage chamber again in contrast to the gravity system of Booth and the incompatible Ehrick compaction and storage chamber.

The various dependent claims 25-39, 41-45 and 48 recite additional significant features of applicant's invention and further distinguish over the prior art of record.

Having regard to the amendments and arguments presented above, it is submitted that claims 25-39 and 41-45, as amended, and new claims 46-48, are patentable over the cited references. Accordingly, favorable reconsideration of the amended and new claims is respectfully requested.

Respectfully submitted,
DINSMORE & SHOHL LLP

By


Timothy W. Hagan
Registration No. 29,001

One Dayton Centre
One South Main Street, Suite 500
Dayton, Ohio 45402-2023
(937)223-2050
Facsimile: (937)223-0724